Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
The Establishment of Policies	)	IB Docket No. 99-81
and Service Rules for the Mobile	)	RM-9328
Satellite Service in the 2 GHz Band	)	

REPLY COMMENTS

The Wireless Communications Association International, Inc. ("WCA"), by its attorneys and pursuant to Section 1.415 of the Commission's rules, hereby replies to the comments filed in response to the *Notice of Proposed Rulemaking* ("*NPRM*") in this proceeding.[1/]

In its initial comments in this proceeding, WCA urged the Commission to assure that the introduction of Mobile Satellite Service ("MSS") into the 2165-2200 MHz band not hamper the deployment of innovative fixed wireless broadband services by Multipoint Distribution Service ("MDS") licensees at 2150-2162 MHz.[2/] Specifically, WCA urged the Commission (i) to make clear that MSS licensees will have to design their receivers to reject MDS emissions that comport with the spectral mask and power limitations set forth in Sections 21.908 and 21.904 of the Commission's rules,[3/] and (ii) to assure that out-of-band and spurious emissions from MSS downlink usage of the 2165-2200 MHz band not cause interference to MDS facilities operating

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[1/] *See The Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, FCC 99-50 (rel. Mar. 25, 1999)[hereinafter cited as "*2 GHz MSS NPRM*"].

[2/] *See* Comments of Wireless Communications Ass'n Int'l, IB Docket No. 99-81, at 1-2 (filed June 24, 1999)[hereinafter cited as "WCA Comments"].

[3/] *See id.* at 3-6.

in the nearby 2150-2162 MHz band by requiring 2 GHz MSS satellite systems, at a minimum, to maintain their power flux density at the earth's surface to -154 dBW/m² using a 4 kHz resolution bandwidth within the 2150-2162 MHz band.[4/] The record established in response to the *NPRM* fully supports adoption of WCA's proposals.

I. The Commission Should Make Clear That It Will Not Protect Inefficiently-Designed MSS Receivers.

Although the *NPRM* squarely raised the issue,[5/] not one of the commenting parties has asserted that MSS receivers will suffer interference from MDS transmissions in the 2150-2162 MHz band that comport with the Commission's MDS technical rules. Thus, to provide MDS licensees with the certainty they need to make the massive investments necessary to provide fixed wireless broadband services over MDS spectrum, the Commission should utilize this proceeding to declare in no uncertain terms that MSS operators either will have to design their receivers to reject interference from MDS transmissions that comply with the MDS technical rules, or will be required to accept any resulting interference. For the reasons set forth in WCA's comments, which need not be repeated here, MDS licensees can hardly be placed in the position of deploying fixed broadband wireless services without knowing whether their equipment will need to be replaced if and when spectrally-inefficient 2 GHz MSS receivers are ever deployed. A more rational approach is to settle this matter now, and make certain that MSS systems utilize receivers with appropriate selectivity.

[4/] *See id.* at 7-9.

[5/] *See NPRM* at ¶ 117.

II. The Rules Proposed In The *NPRM* Fail To Adequately Protect MDS Operations From Out-Of-Band Transmissions By MSS.

In response to concerns previously expressed by WCA over the potential for out-of-band and spurious emissions by MSS to interfere with MDS operations at 2150-2162 MHz, the *NPRM* solicits comment on whether it is adequate to merely impose on MSS licensees the restrictions on out-of-band and spurious emissions already set forth in Section 25.202(f) of the Commission's Rules.[6/] In its comments, WCA established that because the spectral mask set forth in Section 25.202(f) is defined relative to the transmitted power, and the Commission has not proposed any limitation on MSS transmitted power, Section 25.202(f) is not, in and of itself, sufficient to protect MDS operations at 2150-2162 MHz.[7/] Based on engineering analyses recently submitted to the Commission with regard to a proposed satellite system in the 2.3 GHz bands, it now appears that it would be appropriate to impose a requirement that 2 GHz MSS satellite systems be required, at a minimum, to maintain their power flux density within the 2150-2162 MHz band at the earth's surface to -208 dBW/m²/Hz (or its equivalent of -172 dBW/m² using the 4 kHz resolution bandwidth generally used in Part 25).[8/]

[6/] *See NPRM* at ¶ 114.

[7/] *See* WCA Comments at 7-8.

[8/] In its Comments, WCA had suggested that a power flux density limit of -190 dBW/m²/Hz (or its equivalent of -154 dBW/m²/4 kHz) might be appropriate. *See id.* at 8-9. Shortly after those comments were submitted, however, BellSouth Wireless Cable, Inc. filed with the Commission an analysis which demonstrated that somewhat greater protection would be required to prevent cochannel interference to terrestrial receivers in the 2.3 GHz. *See* Letter from Karen Possner, BellSouth Wireless Cable, Inc. to John O'Connor, Wireless Telecommunications Bureau, regarding discussions with government of Mexico to coordinate use of 2305-2360 MHz band

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WCA was hardly alone in noting that Section 25.202(f) is inadequate to protect those who will be operating on frequencies near to MSS. Indeed, the National Telecommunications and Information Administration ("NTIA") also recognized that the proposed MSS spectral mask fails to provide meaningful protection because it only requires out-of-band attenuation relative to the in-band transmitted power, and there is no maximum permitted in-band power limit.[9/] And, while a handful of satellite interests note in passing their support for application of the Section 25.202(f) spectral mask or some alternative to MSS, not one of them provides even the slightest discussion of the potential for interference to MDS of out-of-band and spurious emissions by MSS systems.[10/]

[8/] (...continued)
(filed July 16, 1999). Since the system architectures and equipment for terrestrial operations in the 2.3 GHz Wireless Communications Service bands are very similar to those used by operators in the 2.1 GHz bands (and, in many cases, are intended to be integrated with MDS operations), this power flux density limit appears to be equally applicable to protect MDS operations in the 2150-2162 MHz bands.

[9/] *See* Comments of Nat'l Telecommunications and Information Admin., IB Docket No. 99-81, at 20-21 (filed June 24, 1999). Although NTIA's comments were focused upon potential MSS interference to governmental use of the spectrum above the 2165-2200 MHz MSS allocation, NTIA's point is equally valid with respect to the MDS and other services operating below 2165 MHz.

[10/] *See* Comments of Boeing Co., IB Docket No. 99-81, at 38 (filed June 24, 1999); Comments of BT North America Inc., *et al*, IB Docket No. 99-81, at 38 (filed June 24, 1999)(generally supporting application of "Big LEO" rules to MSS); Comments of Globalstar, L.P., IB Docket No. 99-81, at 48-49 (filed June 24, 1999); Comments of ICO Services Limited, IB Docket No. 99-81, at 22 (filed June 24, 1999); Comments of Iridium LLC, IB Docket No. 99-81, at 62 (filed June 24, 1999). WCA notes that Celsat America, Inc. ("Celsat") has proposed to limit to -120.5 dBm/m²/4 kHz (or 150.5 dBW/m²/4 kHz) the spectral density from one satellite system falling within another satellite system's allocated band. *See* Comments of Celsat America, Inc., IB Docket No. 99-81, at 12 (filed June 24, 1999). While WCA expresses no opinion as to whether
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III. The Commission Should Confirm That LMDS Licensees Will Retain Their Primary Status As Against MSS Feeder Links.

In their comments in response to the *NPRM*, Winstar Communications, Inc. ("Winstar") and Bosch Telecom, Inc. ("Bosch") both urged the Commission to confirm that if Celsat is permitted to utilize any portion of the 27.5-28.35 GHz band for feeder links, such use will be on a secondary basis to Local Multipoint Distribution Service ("LMDS") use of the band.[11/] For the reasons advanced by Bosch and Winstar, WCA agrees that the Commission should make clear that any use by Celsat of the 27.5-28.35 GHz band for feeder links is secondary in all respects to any existing or future use of that band.

In short, the record developed by the comments submitted in response to the *NPRM* fully supports the positions advocated by WCA. Therefore, WCA renews its call for the Commission

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[10/] (...continued)
that is an appropriate limit for inter-MSS system protection, for the reasons set forth in WCA's initial comments, it does not adequately protect MDS.

[11/] *See* Comments of Bosch Telecom, Inc., IB Docket No. 99-81, at 2-3 (filed June 24, 1999); Comments of Winstar Communications, Inc., IB Docket No. 99-81, at 2-5 (filed June 24, 1999).

(i) to declare that MSS operators will be required to accept interference from MDS should they choose to deploy spectrally-inefficient receiver designs and (ii) to adopt a MSS spectral mask which provides meaningful interference protection to MDS operations at 2150-2162 MHz. In addition, the Commission should provide the declaration requested by Winstar and Bosch confirming that any MSS feeder link use of bands allocated on a primary basis for LMDS will be on a secondary basis.

Respectfully submitted,

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July 26, 1999

CERTIFICATE OF SERVICE

I, Stephanie C. Sieber, hereby certify that a true copy of the foregoing Reply Comments was served this 26th day of July 1999, by depositing a true copy thereof with the United States Postal Service, first-class postage prepaid, addressed to the following:

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